

T1 upregulated paired upregulated unpaired gene median difference	T1 upregulated unpaired T4 upregulated paired gene median difference	T2 upregulated paired T4 upregulated unpaired gene median difference	T3 upregulated paired gene median difference	T3 gene
CR44615 0.277330983	EbpIII 0.412782109	CG16884 0.921867512	mir-282 0.440531643	CR44371 0.497292904
CR45910 0.67958175	EbpIII 0.577172896			
CG8078 0.252122208	vajk-1 0.388687221	snmRNA:838 0.690310686	tRNA:H:48F 0.424002366	CR43700 0.49550436
CR46075 0.534323492	CR45212 0.57435783			
CR45738 0.235015078	CR45525 0.340389871	CR45828 0.671379185	snoRNA:Psi18S-301 0.398396121	tRNA:CR32287
0.448141594	CR45185 0.489767243	tRNA:CR32288 0.460817855		
CR44982 0.217808379	CR44468 0.264248697	CR45827 0.655579524	CG145720.37594607	CR45008 0.388419869
CG322760.476363359	CG5013 0.425503591			
Mdh1 0.215908012	CG130460.256043323	CR44621 0.651344666	CG6272 0.318512664	CG325790.384253099
CR44371 0.435312339	Cpr64Aa 0.416533833			
CR45793 0.211194228	CR44756 0.253111402	CR44383 0.647201226	CG8788 0.309800039	mRpL35 0.375981937
0.385191119	CG33226 0.400583256			Mdh1
CG14153 0.210680049	CG10264 0.252201988	Cpr64Aa 0.634356582	CG44286 0.309800039	CG32806 0.371421287
0.374928881	RpIII5 0.398916633			mir-929
CG15390 0.209996455	CR31144 0.249034261	Lcp65Aa 0.629726313	CG321700.289413377	CR44420 0.358345117
CG322590.372388309	CR31144 0.384688092			
CR45226 0.20632219	CG11523 0.248620005	CR44264 0.627794538	CG339460.285059703	mRpL27 0.353408745
CR45911 0.366862025	CG133600.369069225			
CR45257 0.187817503	CR44297 0.235978527	Osi19 0.599981869	CG111370.278175033	CG9319 0.353034388
0.358146646	CR43243 0.359974491			His4r
CG12643 0.184048409	CG8788 0.233134783	CG325790.566667929	yip2 0.266677203	Nup54 0.337105222
0.321918576	CG3776 0.344852831			lawc
CR44092 0.180230699	CG44286 0.233134783	CG136400.551293754	CR45925 0.262405885	snoRNA:lola-a 0.332696885
COX7C 0.321655446	TwldlBeta0.344055074			
Rap2l 0.178456977	CR44091 0.226583796	obst-A 0.531709906	Gapdh1 0.261631532	pncr015:3L 0.323386434
amon 0.305330163	CG3301 0.335915107			
lawc0.177974894	CG145720.223864557	ATPsynC0.530832873	Acp54A10.255820662	CR45172 0.296421806
0.290075617	CG331770.331934422			CR45217
CG8097 0.176500668	CG32551 0.223843007	CR45682 0.530038519	mRpS25 0.24732907	CG320390.285503056
0.270807102	CG7772 0.331758442			prt
CG322020.156730557	CG130670.208616798	Pcd 0.527992877	CG302800.244847001	CG102570.275964434
tRNA:R2:42Ad 0.26666592	Pcd 0.330011575			
CG133440.155802983	CG156500.208317654	CG130310.524452207	GstO2 0.238419699	tRNA:CR32289 0.269283157
CR44615 0.260906775	Cpr49Ah 0.316283164			
CR43951 0.151792645	CG130820.196458727	CG5934 0.514051262	CG116680.237818523	CG107540.261503736
0.258767737	CG312290.314796292			MFS15
CG7222 0.14584686	GstO2 0.195514721	tRNA:CR32289 0.507285037	Obp56d 0.233317098	CG422390.247030622
Osi15 0.248485506	Cpr64Ac 0.314737379			
snmRNA:204 0.144306701	Sec61gamma 0.189037937	CG132390.506590904	olf186-M 0.22831578	CG139280.245296785
CG171860.247160146	Hn 0.309846522			
CG327360.143732978	CR45465 0.183130152	CG5885 0.504983857	pinta0.225803999	CG137510.231771298
0.240562101	CG148170.305486725			CR45054
CG423080.143732978	yip2 0.167094994	CIAPIN1 0.503895606	Cdk7 0.21706078	jdp 0.229115768
0.240043627	CG16885 0.302295238			CR44982
wac 0.139888244	Cpr64Ac 0.164434553	vajk-1 0.495665899	CG331700.201247576	TRAM 0.219112388
0.231258018	snRNA:U2:34ABc 0.296680894			CG15390
CG101940.138425822	CG130480.164163849	CG6908 0.483372081	CG3566 0.189762877	CG132990.216965121
0.227682031	obst-A 0.295342247			Su(P)
CR45647 0.133132482	CR46258 0.159131695	CG42568 0.483232678	CR46108 0.185819473	CG111910.209275493
0.217429285	pst 0.292154282			Osi14
CR43837 0.128417299	SamDC 0.156219122	DnaJ-60 0.483232678	CG118520.185382388	CG8500 0.195425992
3zeta 0.210983764	CR45341 0.290342344			14-3-
PMP34 0.121405125	RpS15Ab0.151167544	CG8319 0.477010425	CG121180.184939984	CG140960.187644474
0.191232517	CG6908 0.29014988			CG8229
Osi14 0.113731359	CG440900.150282939	CG30101 0.462750556	CR453500.184629979	CR455540.182409074
CG326380.189906837	CG342500.288905672			
CR44034 0.113362879	CG8360 0.130680153	CG318120.453621459	CG6429 0.182370406	Tes 0.177169102
0.18873915	CG151990.284742507			CG11396
CG8441 0.106493967	Vti1b 0.128881532	CR44468 0.451643616	Cyp6a15Psi 0.179254238	CG3226 0.174007387
0.187750554	CG110690.282426079			fax

CG313470.103373758 CG170680.126638269 RpII15 0.441577617 Taldo 0.177129974 CR459110.169427226
CR434590.18715734 verm 0.282088424
cl 0.099008987 CG173330.126607313 GstE8 0.43308681 CG175490.173298949 Faf20.161528552 CG4404
0.182190121 CG8008 0.279414331
CG1463 0.097637204 Cpr66D 0.109881444 E(spl)mbeta-HLH 0.429462508 CG149680.168471595 CG328150.157256724
CR452260.175244279 CG116930.27694896
CG6023 0.08944409 CR434180.107680957 CG426150.422253337 Syx8 0.164173351 Flo1 0.155248808 CR44082
0.174902941 bc100.272366295
CCAP-R 0.089142677 CG102050.106846742 CG150980.419614488 CG155150.163139127 CR459190.149914009 sesB
0.172773867 CR456810.269608735
Letm1 0.088187379 CG3894 0.096889 Mmp1 0.417732858 CG130820.161364833 CG3939 0.146792524 ST6Gal
0.170860438 ATPsynC0.269423072
Kr-h2 0.085023452 CR462630.081663937 CG317170.40337493 CG7872 0.158342956 B-H1 0.145937495 CG6044
0.166387127 CG9498 0.269003417
egl 0.084598384 CG7896 0.066375907 CG140960.397831465 CG173370.157899493 Ef1alpha100E 0.138778671
CG177640.160580223 Rpn12 0.264503349
Uba1 0.081728306 CG102080.053148204 CR311440.389842619 Adk2 0.151644875 CG106020.124627966 Cad96Ca
0.155569745 CG117900.261524476
NK7.1 0.077593499 CG148920.036883803 CG110690.389586147 CG155450.143479935 mei-S3320.124224386 cpx
0.150672968 CG159220.259482098
CG3655 0.074315532 CG3301 0.389430714 CG9928 0.138557917 Pu 0.111935731 CR452570.148057324
CR447560.256328272
HmgZ 0.074223488 tal-1A 0.387613802 Acox57D-p 0.136660782 CG9960 0.084403395 CG1943
0.147701037 CG9396 0.255647356
CR439700.066598147 tal-2A 0.387613802 CG7457 0.133158586 Snapin 0.084403395 CR454550.142196327
CG423670.252694217
CG4199 0.065839336 tal-3A 0.387613802 Prx2540-1 0.131930863 put 0.070365094 mub 0.141212713
hacd1 0.247129175
B4 0.059917963 tal-AA 0.387613802 Fmo-2 0.12685285 Vps4 0.063407735 mRpL18 0.130011019
CG155460.243281632
Sh3beta 0.052819151 Cpr49Aa 0.383542229 scu 0.124322156 TM4SF 0.121515856 CG15919
0.241628282
CG456760.377790366 CG5397 0.123141617 CG123380.121215063 Trx-2 0.240126248
CG105810.372528113 CG326500.115053627 nSyb 0.120562861 CG422590.240076301
CG5390 0.364145974 CG9521 0.112168723 Cam0.119981529 GstE8 0.239834199
CG146460.364121947 CG103440.109600827 coro 0.113692908 CR459550.238522275
Nxt1 0.358017884 Hsp70Bb 0.10006016 capt 0.11240777 CG342640.237319261
CG340100.357460548 CG5867 0.092222948 CD98hc 0.112150887 CG431560.236414972
CR447560.344758628 CG137310.089002603 Bem46 0.110490112 Sp212 0.234416261
Cpr64Ad 0.342605644 ND-B16.6 0.087478282 elav 0.107837763 Sod3 0.227616478
GstZ1 0.337037267 rempA 0.07664405 CG3662 0.100964959 l(2)34Fc 0.222674259
CG130260.335536477 CREG 0.070426876 hipk 0.099946953 CG5191 0.22258279
CG316260.331424542 Argk 0.099842052 Rel 0.220237124
Cpr49Ah 0.327439081 VACHT 0.098996575 Prosbeta10.219186757
Lsm10 0.325183353 p-cup 0.098364985 CG146260.217619114
PGRP-LF 0.316930419 CG2034 0.097171066 CG138910.217412703
ver 0.316728489 Dyb 0.095898695 Rab19 0.21710389
CR455010.314651942 CG424020.092116441 tal-1A 0.216335787
Cpr78Cb 0.314251476 ebd10.091585532 tal-2A 0.216335787
CG137480.309267346 jdp 0.091440564 tal-3A 0.216335787
GstO1 0.305328489 cdc14 0.089556071 tal-AA 0.216335787
CG8317 0.304894552 Task6 0.088172755 CG132390.215682186
CR444690.30187453 Rgk1 0.084261617 HSPC300 0.21362301
CR431960.294046885 NK7.1 0.082933812 CR445360.213257515
CG422690.294010102 sdt 0.076250503 prtp 0.212577928
Asciz 0.293543957 CG7365 0.07415765 olf186-M 0.206988899
CR455410.287207311 arg 0.071877861 CG5618 0.206949943
CG105840.285978582 HmgZ 0.066010073 Cpr76Bd 0.206129581
CG105620.282053441 CG6664 0.065166295 CG146460.202982788
Hsf 0.280913843 kek10.044955106 Cyp6d5 0.20268731
Cyp6d5 0.280300983 CG6891 0.039970875 CG301540.202654633
CG172240.279295302 CR446210.202594683
Cyp6g1 0.272923329 CG109340.202064039
CHKov2 0.272210792 CG301970.20159658

Ugt35b 0.270581672
CR44888 0.265451641
CG117770.265318283
CG141470.264757679
CG3700 0.259193656
CG433670.257256846
CR44168 0.255130724
CG9372 0.253242318
CG2604 0.24994351
CG155460.247637262
CR44107 0.247020781
RpS15Ab0.246807288
CG4407 0.232656775
CG116930.232331482
CG8525 0.230833578
CR451500.229566563
Cyp9f2 0.228864608
Ptr 0.225632294
Myb0.214483731
Prosbeta30.20205398
Adam 0.197112423
GstO2 0.196137361
CG3552 0.191342077
CG146610.187271298
CR44893 0.186454675
yip2 0.186070485
CG170680.180952394
CG180670.176154802
CG7896 0.175830394
Cpr47Ea 0.171036599
Dip-B 0.157562554
FucT6 0.157093531
Eflbeta 0.139761752
PCB0.132099268
wal 0.131733375
CG115970.127514551
CG179190.125984766

CG8066 0.201537614
IM3 0.20078698
CG2852 0.19985339
CG1806 0.198895768
CR45663 0.197883803
CG155150.196955864
CG115970.196606591
CG180670.196557135
CR45828 0.195199066
CG324440.194281442
CG334740.19267525
CG7192 0.190244846
Reg-5 0.190007696
PGRP-LF 0.18699298
CG8331 0.186689784
CG326490.184775758
CG3770 0.184710487
Kaz1-ORFB 0.183886902
SdhC 0.182490166
CG8360 0.182374777
grass 0.18217618
CG433940.180280813
CG4933 0.179710185
CG6543 0.179625438
CG6028 0.178929905
ird5 0.178502914
CG5390 0.178403147
CG9336 0.177810879
Peritrophin-A 0.176956555
CG316730.174398197
Cyp317a1 0.174175385
Gp150 0.174100878
Spn28Dc 0.172838655
CG5009 0.172625446
CR44830 0.172473899
CG1673 0.169826403
Treh0.169181839

CG172720.168733937
Cyp6a2 0.165877273
CG134300.165459516
CG180650.165459516
Cyp311a1 0.161488819
alpha-Est1 0.160229586
CG138330.15984491
Cyp4d8 0.159288827
IM4 0.158546473
Idgf2 0.158013668
CG103450.155555889
ITP 0.153769334
CG8379 0.152949308
Cyp6v1 0.152752174
modSP 0.152367577
EloC 0.15133977
CG146610.149415652
Wsck 0.149040062
CG3294 0.148117007
CG5381 0.147476084
FucT6 0.1458965
Prosalph2 0.145766432
GstE2 0.143794475
yip2 0.142970737
Cyp9f2 0.141206334
epsilonCOP 0.141206255
CG4622 0.141008231

yellow-f20.140083497
spirit 0.139936373
CG9117 0.138822655
CR45909 0.137228061
CG341200.136326197
CG102370.136045272
CG9701 0.133624535
CG424460.13320312
CG304270.129621211
CR46108 0.129118013
CG137480.128248547
RpS3A 0.127384551
Pgk 0.126511624
CG425570.12644247
CG425580.12644247
Cyp6g1 0.125671008
Gs2 0.124823543
Spn77Ba 0.12347735
l(3)mbt 0.120693657
PGRP-LE 0.120311312
CG324850.120151817
Gapdh2 0.118047192
wtrw 0.11584655
CR44960 0.115335731
eIF2B-gamma 0.115318003
Ugt36Bc 0.114283912
CG5853 0.114021193
laza 0.111988493
Hs2st 0.111699304
Nmdmc 0.109281628
zye 0.109019176
yellow-e 0.101760749
CG133770.101626585
CG142590.100825199
serp 0.09859853
CG2921 0.097639394
AOX3 0.096739843
CG1299 0.095217809
CG132840.094349336
CG156150.093732713
Pxd 0.092576801
Hsf 0.090321843
GNBP3 0.090016222
CG121710.089869395
ImpL2 0.089280731
b6 0.086294782
CG138410.08394973
CG141470.081714858
cathD 0.078689639
CG9083 0.077965382
CG337250.077048133
CG7920 0.07684876
CG6762 0.074799756
CG138950.072517029
exu 0.071453615
CG156020.068720148
Mmp1 0.066318582
CG7457 0.063952937
Vinc0.054285941
aay 0.046038412

Table S2: Results 48 h memory RNAi screen

Gene ID	Gene Symbol	Stock No. RNAi line	PI	SEM
CG6438	<i>amon</i>	44001	19.50	4.12
CG33979	<i>capt</i>	33010	devd	-
CG3319	<i>Cdk7</i>	57245	17.99	3.51
CG11069	<i>CG11069</i>	v101080	13.79	2.67
CG12338	<i>CG12338</i>	57779	32.00	4.60
CG14572	<i>CG14572</i>	51050	31.27	4.63
CG16884	<i>CG16884</i>	v108690	25.81	6.71
CG32579	<i>CG32579</i>	57784	37.77	5.31
CG33226	<i>CG33226</i>	v102384	19.35	5.86
CG6272	<i>CG6272</i>	33652	18.25	3.93
CG8788	<i>CG8788</i>	v102344	17.05	3.83
CG9319	<i>CG9319</i>	56565	28.29	3.61
CG15006	<i>Cpr64Aa</i>	v42880	39.78	5.02
CG14548	<i>E(spl)mβ -HLH</i>	50674	22.75	2.92
CG11390	<i>EbplII</i>	55933	41.26	5.01
CG6673	<i>GstO2</i>	v109255	24.71	3.09
CG6746	<i>hacd1</i>	v103625	42.99	6.23
CG7399	<i>Hn</i>	60025	20.63	3.45
CG5748	<i>Hsf</i>	v108851	devd	-
CG7287	<i>Lcp65Aa</i>	v109231	21.79	5.95
CG5362	<i>Mdh1</i>	v110604	22.24	5.69
CR42880	<i>mir-282</i>	61414 ^a	32.43	4.55
CG4859	<i>Mmp1</i>	v101505	35.14	4.15
CG13410	<i>mRpL35</i>	v103388	18.06	3.47
CG8524	<i>NK7.1</i>	v108177	16.75	5.44
CG17052	<i>obst-A</i>	60039	37.03	5.63
CG15189	<i>Osi19</i>	v102805	23.23	3.55
CG10251	<i>prt</i>	v104763	24.99	5.12
CG9533	<i>rut</i>	v101759	8.92	4.17
CG9027	<i>Sod3</i>	v8760	24.81	3.68
CG4109	<i>Syx8</i>	v107014	18.44	2.41
CG16886	<i>vajk-1</i>	v102445	2.39	2.88
CG6842	<i>Vps4</i>	v105977	devd	-
CG4600	<i>yip2</i>	v26562	21.10	4.67

^a *miRNA sponge construct*
devd, developmental defect

Table S3: Retest of hits with a different RNAi line

Gene Symbol	Stock No. RNAi line	PI	SEM
<i>vajk-1</i>	v38024	9.53	3.87
<i>CG32579</i>	v110645	24.48	3.19
<i>obst-A</i>	v102591	27.89	3.92
<i>EbpIII</i>	v100157	28.77	3.96
<i>Mmp1</i>	31489	29.50	4.59
<i>CG12338</i>	v108398	35.77	4.25
<i>hacd1</i>	v46513	39.20	4.23
<i>CG14572</i>	v18800	44.77	5.10

Gene Symbol mirSVR score

meso18E -1.47

rogdi -1.32

resilin -1.29

nkd -1.28

kraken -1.27

CG31918 -1.26

CG3517 -1.24

Rac1 -1.24

CG13102 -1.22

Calx -1.21

ARY -1.20

CG9304 -1.19

Rab4 -1.19

CG42400 -1.19

nimB5 -1.16

Cda5 -1.16

CG32594 -1.16

CG10031 -1.16

me31B -1.14

CG5853 -1.14

pgant6 -1.14

CG11050 -1.13

Lsd-2 -1.12

Sap47 -1.12

CG11206 -1.11

CG34118 -1.10

CG3088 -1.10

CG7757 -1.10

CG10277 -1.10

CG16971 -1.09

CG7843 -1.09

CG6860 -1.07

lkb1 -1.07

CG2083 -1.07

CG5160 -1.07

CG8468 -1.07

Tsp29Fa -1.07

CG8321 -1.06

ed -1.05

oho23B -1.05

CG3967 -1.04

MESR4 -1.04

Cortactin -1.02

CG6523 -1.01

CG9305 -1.00

CG9009 -1.00

nuf -0.99

CG7156 -0.98

CG12540 -0.98

CG16953 -0.98